

CLAIMS

What is claimed is:

1. A video encoder (100) for receiving input pictures and providing compressed stream data, the encoder comprising:
 - 5 a normal encoding portion (130) for receiving input pictures and providing normal stream data;
 - 10 a lower-quality encoding portion (140) for receiving input pictures and providing channel change stream data; and
 - 15 a multiplexor (150) in signal communication with each of the normal and lower-quality portions for receiving and combining the normal and channel change data streams
2. A video encoder as defined in Claim 1, further comprising a low-pass filter (332) in signal communication with the lower-quality encoding portion (340) for providing low-pass filtered input pictures to the lower-quality encoding portion.
3. A video encoder as defined in Claim 1, further comprising a downampling unit (534) in signal communication with the lower-quality encoding portion (540) for providing downsampled input pictures to the lower-quality encoding portion.
4. A video encoder as defined in Claim 1, further comprising means for creating a channel change stream with more frequent intra-coded pictures in the channel change stream than in a corresponding normal stream.
5. A video encoder as defined in Claim 4, further comprising means for downsampling to create lower resolution channel change stream pictures.
- 30 6. A video encoder as defined in Claim 1, further comprising means for encoding redundant picture syntax in compliance with the JVT standard.

7. A video encoder as defined in Claim 1, further comprising means for encoding channel change pictures into user data of corresponding normal stream pictures.

5 8. A video encoder as defined in Claim 1, further comprising means for signaling to a decoder whether to use normal stream or channel change stream pictures for subsequent channel change stream intra-coded pictures.

10 9. A video encoder as defined in Claim 1, further comprising a picture selector in signal communication with the lower-quality encoding portion for selecting a subset of the input pictures to code in the channel change stream.

15 10. A video encoding method (800) for receiving input pictures and providing compressed stream data, the method comprising:

15 receiving input pictures (812);
encoding normal stream data from the received input pictures (814);
encoding channel change stream data from the received input pictures (816)
wherein the channel change stream data comprises lower-quality encoded data than
the normal stream data; and
20 multiplexing the normal and channel change data streams into a combined
output stream (818).

25 11. A video encoding method as defined in Claim 10, further comprising at
least one of:

25 creating a channel change stream with more frequent intra-coded pictures in
the channel change stream than in a corresponding normal stream;
downsampling to create lower resolution channel change stream pictures;
encoding redundant picture syntax in compliance with the JVT standard;
encoding channel change pictures into user data of corresponding normal
30 stream pictures; and
signaling to a decoder whether to use normal stream or channel change
stream pictures for subsequent channel change stream intra-coded pictures.

12. A video encoding method as defined in Claim 10, further comprising selecting a subset of the input pictures to code in the channel change stream.

13. A video encoding apparatus for receiving input pictures and providing
5 compressed stream data, the apparatus comprising:
means for receiving input pictures;
means for encoding normal stream data from the received input pictures;
means for encoding channel change stream data from the received input
pictures, wherein the channel change stream data comprises lower-quality encoded
10 data than the normal stream data; and
means for combining the normal and channel change data streams into a
combined output stream.

14. A digital videodisc encoded with signal data comprising a plurality of
15 block transform coefficients for each of normal stream and channel change stream
data, the coefficients indicative of an original signal data sequence, the normal
stream data of the digital videodisc having coefficients embodying a normal quality
data sequence, and the channel change stream of the digital videodisc having
coefficients embodying a reduced-quality data sequence, the reduced-quality data
20 sequence comprising at least one additional intra-coded picture.

15. A digital videodisc as defined in Claim 14 wherein the reduced-quality
data sequence is encoded in the picture user data.